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REMARKS

Claims 1, 2 and 4 - 6 are presently pending. In the above-identified Office Action, the Examiner rejected Claims 1 and 2 under 35 U.S.C. § 102(b) as being anticipated by Yoshioka (JP '173). Claims 4 - 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshioka. Claim 6 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshioka in view of Hattori (JP '458).

By this Amendment, Claim 1 has been amended to include the limitations of Claims 2 and 6. For the reasons set forth more fully below, the present application is deemed to properly present Claims patentable over the prior art. Reconsideration, allowance and passage to issue are therefore respectfully requested.

The present invention addresses the need in the art for a leadscrew drive with reduced mass and sufficient strength for current demanding applications. The reduction in mass is made possible by the use of a hollow core. The hollow core also has the effect of reducing the strength of the leadscrew. This is compensated for by application of a nickel-shell for added strength. The invention is set forth in Claims of varying scope of which Claim 1, as amended, is illustrative. Claim 1, as amended, recites:

1. A leadscrew drive comprising:
a leadscrew follower; and
a leadscrew, wherein the leadscrew comprises an elongated annular leadscrew shell having a thread-form outer surface, the elongated annular leadscrew shell being made of a nickel-base metal and having no core support.

None of the references, taken alone or in combination teach or render obvious the invention as presently claimed. That is, none of the references taken alone or in combination teach or render obvious a leadscrew drive having a hollow leadscrew with a nickel shell as presently claimed.

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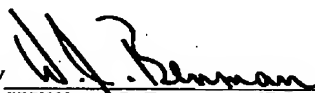
As mentioned above, in the above-identified Office Action, the Examiner rejected Claim 1, 2 and 6 over Yoshioka. Further, Claim 6 was rejected under 35 U.S.C. § 103(a) over the combination of Yoshioka and Hattori.

Yoshioka was cited for teaching a leadscrew. The Examiner acknowledged that Yoshioka does not teach a leadscrew being made of nickel. However, the Examiner cited Hattori and suggested that it would be obvious to use nickel in the fabrication of the leadscrew.

However, this assertion is erroneous inasmuch as it does not take into account the fact that the claims call for the 'shell' to be made of nickel. This design requires a nonobvious manufacturing process, e.g. deposition, to provide the shell. The nickel based shell construction adds strength to the leadscrew which is typically not needed for nonhollow leadscrew designs.

Clearly, the cited references, taken alone or in combination, do not teach or render obvious a leadscrew drive with a hollow leadscrew with a nickel-base metal shell as presently claimed. Accordingly, reconsideration allowance and passage to issue are respectfully requested.

Respectfully submitted,
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